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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,700	04/14/2006	Patrice Caillat	034299-692	8818

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EXAMINER	
GEDEON, BRIAN T	
ART UNIT	**PAPER NUMBER**
3766	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/575,700	CAILLAT ET AL.	
	Examiner	Art Unit	
	Brian T. Gedeon	3766	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 April 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/10/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 19-21 recite the limitation "communication device" in reference to claim 16. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-8 and 11-~~23~~ 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Archer et al. (US Publication no. 2002/0077670).

In regard to claims 1 and 16, Archer et al. disclose a stimulation signal generator to the central nervous system in order to prevent undesirable neurological events from occurring such as epilepsy, para [0010]-[0011]. The device has a switch matrix 312 (commutation/interconnection device) connected to a set of electrodes 314, wherein the matrix 312 serves to select different electrode configurations for outputting an

stimulation signal, para [0086] and [0122]. The switch matrix 312 is comprised of FET switches, which the Examiner recognizes as an equivalent, or component of, an electromechanical bistable switch in a MEMS.

In regard to claims 2-6, the neurostimulator of Archer et al. contains, in addition to the switch matrix 312, a communication subsystem 634 containing an antenna for a RF link, para [0126]. The communication subsystem allows for communication between the device and any external programmer known in the art.

In regard to claims 7, 8, 13, and 18, power supply 636 supplies power to each of the subsystems of the neurostimulator, includes the electrode interface switch matrix 620, para [0127].

In regard to claims 11, 12, 14, 15, and 19, the device of Archer et al. contains electrodes 612-618 connected to electrode switch matrix interface 620. The electrode switch interface 620 selects the electrode configurations as required for sensing or stimulation, para [0122]-[0123]. An EEG analyzer is also included in order to indicate the onset of an adverse neurological disorder.

In regard to claim 17, the device of Archer et al. has a stimulation subsystem 624 for generating electrical stimulation signals, para [0124].

In regard to claims 21 and 22, The device has a switch matrix 312, and equivalent electrode interface 620, (commutation/interconnection device) connected to a set of electrodes 314, wherein the matrix 312 serves to select different electrode configurations for outputting an stimulation signal, para [0086] and [0122]. The switch

matrix 312 is comprised of FET switches, which the Examiner recognizes as an equivalent, or component of, an electromechanical bistable switch in a MEMS.

In regard to claim 20, it is well known, and inherent, that implantable medical devices be comprised of biocompatible materials to prevent device rejection, or a toxic infection from an incompatible material.

In regard to claims 23, and 27-29, the device of Archer et al. anticipates the method as claimed in that electrodes are placed in position on the cerebellum or deep brain structures, such as the thalamus, basal ganglia, hippocampus, etc, para [0019]. Further, the neurostimulation device of Archer et al. already includes a commutation device equivalent in the form of the switch matrix 312 or electrode interface 620, therefore the step of connecting the electrodes to a commutation device is also anticipated. The neurostimulator device is used to treat adverse neurological disorders, para [0010]-[0011].

In regard to claim 24, figure 21 shows the neurostimulator, containing the electrodes and commutation device equivalents, implanted in the patient's skull. It is also well known in the art to implant neurostimulators for deep brain stimulation subcutaneously in a patient's chest, with an electrode lead running through the neck into the patient's brain.

In regard to claim 25, the placement of the electrodes in the brain is aided by testing the responsiveness of stimulated neurons, para [0017]-[0019].

In regard to claim 26, the neurostimulator of Archer et al. contains, in addition to the switch matrix 312, a communication subsystem 634 containing an antenna for a RF

link, para [0126]. The communication subsystem allows for communication between the device and any external programmer known in the art.

5. Claims 1-29 rejected under 35 U.S.C. 102(e) as being anticipated by Gliner et al. (US Publication no. 2003/0125786).

In regard to claims 1 and 16, Gliner et al. describes a implantable stimulation apparatus for stimulation regions of the brain, para [0010]. The stimulation apparatus includes electrode 2210, 2220, 2230, 2240, which are coupled to a switch circuit 2250. The switch circuit 2250 contains a plurality of switches that can be used to control the electrical field established in the brain by the electrodes, para [0126]. The switch circuit is considered to be the commutation/interconnection device.

In regard to claims 2-10, an integrated controller 820 is a wireless device that responds to signals sent from an external controller, 850. The device of Gliner et al. contains a RF transducer or magnetic transducer (i.e., antenna equivalents) for wirelessly communicating power to the rechargeable battery from an external programmer 850, para [0111].

In regard to claims 11-15 and 17-19, the device of Gliner et al. has a plurality of electrodes 2210, 2220, 2230, 2240, for stimulation, and a pulse generator 2050 for generating electrical stimulation pulses. A rechargeable power supply 810 is also included in the form of a battery. The electrodes are connected to multiple channels of the switch circuit 2250, in which the input of the switch circuit is connected to the output of the pulse generator, para [0126].

In regard to claim 20, it is well known, and inherent, that implantable medical devices be comprised of biocompatible materials to prevent device rejection, or a toxic infection from an incompatible material.

In regard to claims 21 and 22, the device of Gliner et al. contains a switching circuit 2250 comprising switches 2252, 2254, 2256, and 2258, which are used to control the electrical field applied by the electrodes, para [0126].

In regard to claims 23 and 27, the device of Gliner et al. anticipates the method as claimed in that electrodes are placed in position on the cerebellum or deep brain structures, such as the thalamus, basal ganglia, hippocampus, etc, para [0065], [0069]-[0083], and [0087].

Further, the neurostimulation device of Gliner et al. already includes a commutation device equivalent in the form of the switch circuit 2250, therefore the step of connecting the electrodes to a commutation device is also anticipated.

In regard to claim 24, figure 45 shows neurostimulator for brain stimulation subcutaneously implanted in a patient's chest, with an electrode lead running through the neck into the patient's brain.

In regard to claim 25, the placement of the electrodes in the brain is aided by testing the responsiveness of stimulated neurons, para [0065], [0069]-[0083], and [0087].

In regard to claim 26, an integrated controller 820 is a wireless device that responds to signals sent from an external controller, 850.

In regard to claims 28 and 29, the device of Gliner et al. is intended to treat brain disorders ranging from stroke, Parkinson's, or epilepsy, para [0064].

DETAILED ACTION

Claim Rejections - 35 USC § 103

6. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Archer et al. (US Publication no. 2002/0077670) in view of Gliner et al. (US Publication no. 2003/0125786).

In regard to claims 9 and 10, Archer et al. substantially describe the invention as claimed except for the transmission of power through a wireless device in order to recharge an integrated power source of the implantable device. Gliner et al., in a similar field of endeavor, describe an implantable brain stimulator with an integrated controller 820 is a wireless device that responds to signals sent from an external controller, 850. The device of Gliner et al. contains a RF transducer or magnetic transducer (i.e., antenna equivalents) for wirelessly communicating power to the rechargeable battery from an external programmer 850, para [0111]. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the communication circuit of Archer et al. to be capable of transferring power since Gliner et al. teach that it is a known method for recharging a battery of an implantable device without having to explant the device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Gedeon whose telephone number is (571) 272-3447. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela D. Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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